



8543

Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

RBW109-3130-82-103
Job Sheet 188802



11730

Part No: RBW109-3130-82-103

Job Qty: 2 pcs

Part Name: Bushing Removal Tool



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 1/15/19

Job Tracking No:

Due Date: 2/8/19

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG RBW109-3130-82-103 Rev.2 IPP Rev. A 18.12.19 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Small Fab - 1	2 pcs	2/8/19		0.00	0.40	Small Fab - 1		MLC
							Small Fab - 2		
							Small Fab - 3		
							Small Fab - 4		
							Small Fab - 5		
							Small Fab - 6		
							Small Fab - 7		
110	QC 5	2 pcs	2/8/19		0.00	0.00	QC 5 - 10		JL
							QC 5 - 12		
							QC 5 - 17		
							QC 5 - 18		
							QC 5 - 19		
							QC 5 - 22		
							QC 5 - 24		
							QC 5 - 3		
							QC 5 - 38		
							QC 5 - 42		
							QC 5 - 43		
							QC 5 - 49		
							QC 5 - 51		
							QC 5 - 58		
							QC 5 - 68		
							QC 5 - 9		
							QC 5 - 50		
120	Packaging 3-1 - Stock - B4B	2 pcs	2/8/19		0.00	0.00	Packaging 3 - 1 - B4B		DAG 21 9-89
							Packaging 3 - 2 - B4B		
							Packaging 3 - 3 - B4B		
							Packaging 3 - 4 - B4B		
							Packaging 3 - 5 - B4B		
							Packaging 3 - 6 - B4B		
							Packaging 3 - 7 - B4B		
							Packaging 3 - 8 - B4B		



Container No: S160621



Part: RBW109-3130-82-103

Job No: 188802

Serial No/Batch: S160621

Revision: 2

Inspector:

Exp Date:

Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 03/07/19

MAR 09 2019

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	DAG
130 QC 21 - FG	2 pcs	2/8/19	0.00 0.00	QC 21 - FG - 21	21
Part Op Descriptions: 100 - Assemble as per DWG. See note 3.					5-55
MAR 08 2019					
Job BOM					
Part / Item	Component Name	Quantity	Operation	Container	
58 MEZZ 51345 61 105 134 134 105 105 61 97484A055	Rivet, Ø3/32 X 1/4	8 Ea (4 ea)	100-Small Fab - 1	5144290	
AN315-4	Nut	2 Ea (1 ea)	100-Small Fab - 1	112314	
AN4-7A	Bolt	2 Ea (1 ea)	100-Small Fab - 1	5107746	
FNC-3	Collar Nut	2 (1 ea)	100-Small Fab - 1	5148628	
RBW109-3130-82-103-1	Spring	2 pcs (1 ea)	100-Small Fab - 1	5156973	
RBW109-3130-82-103-3	Housing	2 pcs (1 ea)	100-Small Fab - 1	5155640	
RBW109-3130-82-103-5	Extractor Rod	2 pcs (1 ea)	100-Small Fab - 1	5148308	
RBW109-3130-82-103-7	Small Housing	2 pcs (1 ea)	100-Small Fab - 1	5155958	
RBW109-3130-82-103-9	Half Clamp	4 pcs (2 ea)	100-Small Fab - 1	5151488	
SKF-9040	Banded Thrust Bearing	2 (1 ea)	100-Small Fab - 1	5148629	
Job Allocations					
Operation	Component Part	Required	Inventory	Allocated	
100-Small Fab - 1	97484A055	8	250	0	
	AN315-4 MEZZ	2	20	0	
	AN4-7A	2	166	0	
	FNC-3	2	0	0	
	RBW109-3130-82-103-1	2	0	0	
	RBW109-3130-82-103-3	2	0	0	
	RBW109-3130-82-103-5	2	0	0	
	RBW109-3130-82-103-7	2	0	0	
	RBW109-3130-82-103-9	4	0	0	
	SKF-9040	2	0	0	
Part Specifications					
Specifications could not be found.					

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

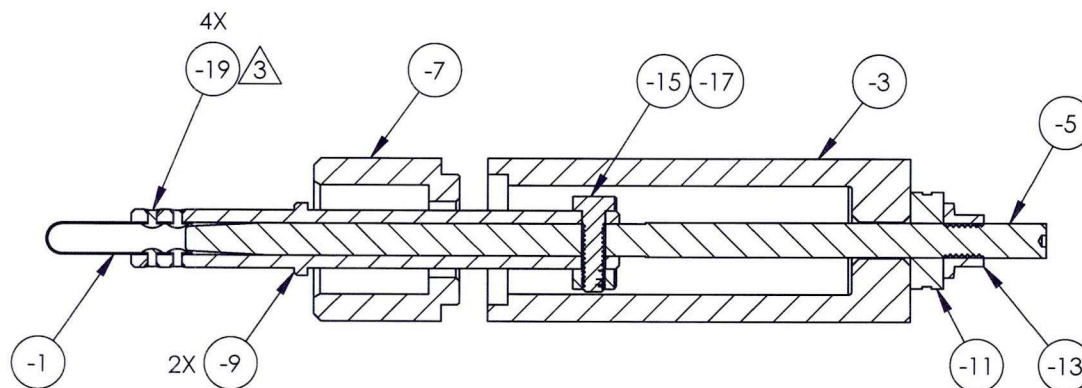
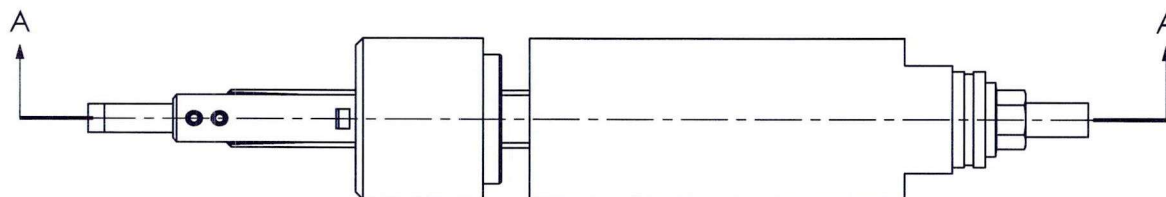
NCR No. _____

Route update only ☐

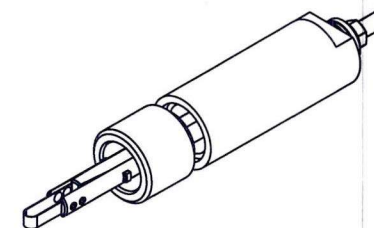
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
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Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
1		-107 CH'D -107 MATERIAL THICKNESS FROM .011 TO .015 CH'D MATERIAL FROM SPERING STEEL TO 301 S.S., ADDED MISSING Ø.094 DIM. ADDED FORMED VIEWS. -135 CH'D HEAT TREAT FROM RC 30-36 TO RC 38-42.	1/5/2015	RJC	SE
2	14-0230	MADE SEPARATE DRAWING FOR THIS TOOL FROM KIT RBW109-3130-82-139.	1/19/2015	RJC	JAG



SECTION A-A



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 188802115
1901-16

NOTE:

1. REF. AGUSTA T/N: 109-3130-82-103.
2. PART OF KIT RBW109-3130-82-139.
3. SAND OUTSIDE SMOOTH WITH SURFACE.

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
			-1	1	SPRING	301 S.S.		2
			-3	1	HOUSING	6061		3
			-5	1	EXTRACTOR ROD	4140/4142		4
			-7	1	SMALL HOUSING	6061		5
			-9	2	HALF CLAMP	4140/4142		6
		B/O	-11	1	BANDED THRUST BEARING	STEEL	Ø3/8 I.D. (REID SKF-9040)	1
		B/O	-13	1	COLLAR NUT	STEEL	3/8-16 UNC (REID #FNC-3)	1
		B/O	-15	1	HEX HEAD CAP SCREW	STEEL	1/4-28 UNF (SPENCER AIRCRAFT #AN4-7A)	1
		B/O	-17	1	HEX NUT	STEEL	1/4-28 UNF (SPENCER AIRCRAFT #AN315-4)	1
		B/O	-19	4	RIVET	ALUMINUM	Ø3/32 X 1/4 (MCMASTER-CARR #97484A055)	1

DART AEROSPACE	
TITLE TAIL ROTOR BUSHING REMOVAL TOOL	
DWG NO. RBW109-3130-82-103	REV 2
MAT'L UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 .XX ± .01 .X ± .1 FRACTIONS ± 1/8 ANGLES ± 5° 1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	DRAWN BY: PERRITT APPROVED: D Weil HEAT TREAT FINISH SPEC USED ON MODEL AW109, AW119
SCALE 1:2	DATE 8/26/2014 SHEET 1 OF 6